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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,388	01/24/2002	Yoshihiro Katsu	JP920010010US1	3893

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INTERNATIONAL BUSINESS MACHINES CORPORATION
DEPT. 18G
BLDG. 300-482
2070 ROUTE 52
HOPEWELL JUNCTION, NY 12533

EXAMINER

DI GRAZIO, JEANNE A

ART UNIT PAPER NUMBER

2871

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/056,388

Applicant(s)

KATSU ET AL.

Examiner

Jeanne A. Di Grazio

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

DETAILED ACTION

Priority

Priority to Japanese Patent Application No. 2001-024758 (Jan. 31, 2001) is claimed.

Response to Arguments

The Examiner acknowledges Applicant's argument that Suzuki et al. (US 2001/0036068 A1) and the present application were subject to an obligation of assignment to International Business Machines Corporation and is thus not prior art.

The Examiner thanks Applicant for the copies of Notice of Recordations filed with Applicant's response of July 29, 2003.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5, 6, and 9-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Takase et al. (US 5,276,600) in view of Zhao et al. (US 6,382,816 B1).

Per claims 1, 3, 5, 6, and 9-19: Takase discloses a curved reflector having a flexible substrate. The reflector according to the Takase invention can be used as a reflecting plate (lamp housing) for a fluorescent lamp in turn incorporated into a backlight source of a liquid crystal display panel (Col. 1, Lines 11-16).

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Turning to Figure 1, Takase teaches a reflector (1a) that is curved for receiving a lamp, and a reflecting film (4) formed on the inner curvature of the reflector.

Takase teaches that a transparent protective layer can be formed on the side opposite to the light reflection layer:

"In the reflector of this invention, the substrate can be provided with a transparent protective layer on the side opposite to the high reflection layer. By such a protective layer, the effects of external environmental factors on the surface hardness, light resistance, gas resistance and waterproofness of the reflector can be reduced further. Examples of materials usable for the formation of such a protective layer include organic materials, e.g., acrylic resins such as polymethyl methacrylate, polyacrylonitrile resin, polymethacrylonitrile resin, silicone resins such as a polymer available from ethyl silicate, polyester resins and fluorinated resins; and inorganic materials such as silicon oxide, zinc oxide and titanium oxide. In particular, lamination of a material capable of shielding light of wavelengths not longer than 400 nm, preferably 380 nm to 10% or less is preferred for the prevention of light deterioration (ultraviolet deterioration) of the silver-containing layer, which prevention is one of objects of this invention. The transparent protective layer is required to have such a thickness that it can exhibit protective effects without lowering the light reflecting ability and impairing the flexibility. The thickness may vary as needed depending on the material and application purpose." (Col. 4, Lines 63-68; Col. 5, Lines 1-21).

Takase furthermore instructs that the substrate film thickness should be at least 5 micrometers, the silver reflective layer is in the range of Angstroms, and the adhesive layer can range from thicknesses of 1-20 micrometers (preferred)(Col. 4.).

Takase does not, however, appear to explicitly specify a thickness of the transparent protective film.

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However, the Zhao reference teaches that a protective layer that protects a layer of silver inside of a lamp housing, preferably has:

“[T]he protective layer of silica, or other oxide, preferably has a thickness of between about 0.05 and about 0.4 micrometers, most preferably, around 0.05-0.14 micrometers. This is thick enough to protect the silver against oxidation during formation of the lamp and against subsequent degradation by atmospheric sulfides.” (Col. 6, Lines 24-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takase in view of Zhao for the purpose of protecting the reflective layer against oxidation during formation of the lamp and against subsequent degradation by atmospheric sulfides.

Claims 2, 4, 7, and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Takase et al. (US 5,276,600) in view of Zhao et al. (US 6,382,816 B1) and further in view of Deloy (US 6,336,728 B1).

Per claims 2, 4, 7, and 8: Takase does not appear to explicitly specify a lamp reflector with arm portions disposed along an emitting surface and back surface and light transmission regions of a specified thickness; however, Deloy teaches a flat panel display guide that has leg sections. The leg portions, in part, allow for enhanced luminance uniformity and the reduction of dead space (Col. 4, Lines 22-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takase in view of Deloy for enhanced luminance uniformity and the reduction of dead space.

Claim 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Takase et al. (US 5,276,600) in view of Zhao et al. (US 6,382,816 B1) and further in view of Simpson (US 6,399,228 B1).

Per claim 20: Takase does not appear to explicitly specify the material of the reflection layer; however, Simpson has a reflector of Ag, Al, and Pt (Col. 9, Lines 6-10 and ABS) for high reflectivity (Id.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takase in view of Simpson for a highly reflective reflector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (703)305-7009. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (703) 305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Jeanne Andrea Di Grazio

Robert Kim, SPE

JDG

TOANTON
PRIMARY EXAMINER